

METHOD FOR PREPARING A NICKEL-BASE SUPERALLOY
ARTICLE USING A TWO-STEP SALT QUENCH

ABSTRACT OF THE DISCLOSURE

An article made of a nickel-base superalloy strengthened by the presence of a gamma-prime phase is prepared by solution heat treating the nickel-base superalloy at a solutionizing temperature above a gamma-prime solvus temperature of the nickel-base superalloy, thereafter first quenching the nickel-base superalloy in a first molten salt bath maintained at a temperature of from the gamma-prime solvus temperature to about 100°F below the gamma-prime solvus temperature, thereafter second quenching the nickel-base superalloy in a second molten salt bath maintained at a temperature below an aging temperature of the nickel-base superalloy, and thereafter precipitation heat treating the nickel-base superalloy at the aging temperature to precipitate an aged microstructure having gamma prime phase in a nickel-base matrix.